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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,778	07/24/2003	Yoshinari Morimoto	116571	8193

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EXAMINER

HUFFMAN, JULIAN D

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/625,778	MORIMOTO, YOSHINARI	
	Examiner	Art Unit	
	Julian D. Huffman	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11, 12 and 15-22 is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5, 6, 10 and 23 is/are rejected.
- 7) ☒ Claim(s) 4, 7-9, 13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 10 is rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi et al. (U.S. 6,454,390 B1).

With regards to claim 10, Takahashi et al. discloses an ink jet printer, comprising:

a printing unit having a carriage and a print head (fig. 5) in which a plurality of ink jet nozzles are arranged in plural columns (fig. 6b), the printing unit printing on a printing medium while reciprocating the print head by the carriage for go-printing and return-printing (column 39, lines 5-9);

a sensor (fig. 8) disposed on the carriage (column 20, lines 58-60) and having a light-emitting portion (31) for emitting light toward the printing medium and a light-receiving portion (32) for receiving reflection light;

a plural patterns printing instructing unit that causes the printing unit to print a plurality of test patterns in each of which vertical ruled lines are arranged with a prescribed pitch, while changing a test pattern printing interval of the return-printing

with respect to the go-printing in plural stages (controller 100, fig. 37, column 39, lines 5-9);

a best pattern detecting unit for scanning-in the printed test patterns with the sensor and for automatically selecting a best test pattern from the scanned-in test patterns (30); and

a best pattern printing instructing unit that causes the printing unit to print information indicating an image of the selected best test pattern on the printing medium (controller, column 41, lines 45-50).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5, 6 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (U.S. 6,454,390 B1) in view of Michel (U.S. 6,215,562).

With regards to claims 1 and 23, Takahashi et al. discloses an ink jet printer, comprising:

a printing unit having a carriage and a print head (fig. 5) in which a plurality of ink jet nozzles are arranged in plural columns (fig. 6b), the printing unit printing on a printing medium while reciprocating the print head by the carriage for go-printing and return-printing (column 39, lines 5-9);

a sensor (fig. 8) disposed on the carriage (column 20, lines 58-60) and having a light-emitting portion (31) for emitting light toward the printing medium and a light-receiving portion (32) for receiving reflected light from the printing medium;

a test pattern printing control unit (fig. 9, elements 100, 150) that causes the printing unit to print a test pattern in which vertical ruled lines are arranged with a prescribed pitch (fig. 37);

a plural patterns printing instructing unit that causes the printing unit to print a plurality of test patterns while changing a test pattern printing interval of the return-printing with respect to the go-printing in plural stages (controller 100, fig. 37, column 39, lines 5-9);

a best pattern detecting unit for scanning-in the printed test patterns with the sensor and for automatically selecting a best test pattern from the scanned-in test patterns (30); and

a best pattern printing instructing unit that causes the printing unit to print information indicating an image of the selected best test pattern on the printing medium (controller, column 41, lines 45-50).

With regards to claim 2, Takahashi et al. discloses that the best pattern printing instructing unit causes the printing unit to print the selected best test pattern on the printing medium at the test pattern printing interval that produces the selected best test pattern as information indicating the image of the selected best test pattern (column 41, lines 45-50).

With regards to claim 3, the best pattern printing instructing unit causes the printing unit to print information indicating a test pattern printing interval that produces

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the selected best test pattern as information indicating the image of the selected best test pattern (column 41, lines 45-50).

With regards to claim 5, the sensor detects at least one of a front end portion, a rear end portion, and a width portion of the printing medium (since sensor is mounted on carriage it may detect any portion of paper, further as sensor scans, it detects various portions of the paper).

With regards to claim 6, Takashi discloses:

a detection result judging unit for judging whether a detection made by the best pattern detecting unit is appropriate (controller 100, column 17, lines 14-32 and column 33, lines 28-36); and

a re-detection executing unit that causes the printing unit to print the plurality of test patterns again while changing a printing condition and causes the sensor to scan the printed test patterns again when the detection result judging unit judges that the detection made by the best pattern detecting unit is not appropriate (controller 100, column 33, lines 38-43, column 38, lines 54-62).

Takahashi discloses everything claimed with the exception of reprinting the selected best test pattern.

Michel et al. discloses reprinting a selected best test pattern after a user makes a selection such that the reprinted pattern is formed in a center amongst other patterns (column 7, lines 3-8 and 39-40). Michel et al. also discloses reprinting patterns if a selected pattern is out of range (column 7, lines 31-34).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Takahashi so as to reprint the selected test pattern as

suggested by Michel et al. for the purpose of enabling errors to be readily detected and corrected by employing an iterative process with coarse and fine iterations.

Response to Arguments

5. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. It is noted that claim 10 has not been amended to include the feature argued as allowable. Claim 10 is not a dependent claim as stated in the arguments.

Allowable Subject Matter

6. Claims 4, 7, 8, 9, 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11, 12 and 15-22 are allowed.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

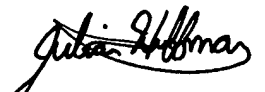
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (571) 272-2147. The examiner can normally be reached on 10:00a.m.-6:30p.m. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Julian D. Huffman
Art Unit 2853
30 August 2006